UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
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ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

		Application No.	Applicant(s)	
· *Office Action Summary*		10/666,418	LILLIEBJERG, ERIK	
		Examiner	Art Unit	
		Michael Wilser	2195	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after t he mailing date of this com munication, even if timely filed, may re duce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 27 August 2007.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 27 August 2007 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1.   Claims 1-20 are pending in this application.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3.   Claims 1 and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Lake

(US 2004/0045003).

4.   As per Claim 1, Lake teaches the invention as claimed including a method of

executing a plurality of tasks of different priority values (abstract, lines 4-6) comprising:

        a. enabling any task irrespective of priority value to request a particular waiting

period during execution of the task (page 1, paragraph 13), wherein the task requesting

the particular waiting period occurs irrespective of elapsed time due to execution of the

task (page 1, paragraph 6);

b. utilizing preemptive multitasking (page 1, paragraph 7); and

c. utilizing cooperative multitasking (page 1, paragraph 7), wherein the

preemptive and the cooperative multitasking increase utilization of processing power of

a processor and ensure higher priority valued tasks are executed with less interruption

time than lower priority valued tasks (page 1, paragraph 3 & page 2, paragraph 16).

5.   As per Claim 8, it is rejected for the same reason as Claim 1 above.

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7.   Claims 2-5 and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Lake (US 2004/0045003) in view of Shi et al. (US 6,757,897).

8.   As per Claim 2, Lake further discloses:

        a. selecting a task from the tasks based on the priority values and a plurality of

statuses associated with the tasks (abstract, lines 4-6), wherein the statuses include

executing, waiting, interrupted, completed, and unstarted (page 1, paragraphs 13 & 15);

        b. starting the selected task and designating the selected task an executing task

(page 1, paragraph 3); and

        c. if the executing task requests a waiting period, suspending the executing task

and designating the executing task a waiting task and repeating the selecting the task

and the starting the selected task (page 1, paragraphs 13 & 14).

9.   However, Lake does not explicitly disclose of when the waiting period elapses for

any waiting task and the executing task has a higher priority value then the waiting task,

designating the waiting task an interrupted task. However, Shi discloses of a method

that does designate the waiting task as an interrupted task when the executing task has

a higher priority then the waiting task column 4, lines 5-19 and 30-45).

10.   It would have been obvious to one of ordinary skill in the art at the time of

invention to have used Shi's status change of tasks in Lake's invention. One would have

been motivated since it is the goal of the invention to allow higher priority tasks to have

precedence over lower priority tasks which allows the system to finish high priority items

while still giving processing time to the less critical tasks and therefore avoiding task

starvation.

11.   And Shi further discloses:

a. if the waiting period elapses for any waiting task and the executing task does

not have a higher priority value then the waiting task, suspending the executing task

and designating the executing task an interrupted task and repeating the selecting the

task and the starting the selected task (column 4, lines 30-45) ; and

b. if the executing task completes execution, designating the executing task a

completed task and repeating the selecting the task and the starting the selected task

(column 6, lines 46-57).

12.   As per Claim 3, Shi further discloses of selecting a higher priority task before a

lower priority task when possible (column 2, lines 34-49).

13.   As per Claim 4, Shi further discloses of selecting a task dependent on completion

of another after the first has completed (column 6, lines 59-67).

14.   As per Claim 5, Shi further discloses of setting a timer based on the waiting

period (column 6, lines 23-45).

15.   As per Claims 9-12, they are rejected for the same reason as Claims 2-5 above.

16.   Claims 6-7, 13-15, and 19-20 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Lake (US 2004/0045003) in view of Bower, III (US 7,051,331).

17.   As per Claim 6, Lake does not explicitly disclose that the tasks are basic input

output system (BIOS) tasks. However, Bower discloses a method and medium for

multitasking in which the tasks are BIOS tasks (column 1, lines 20-27).

18.   It would have been obvious to one of ordinary skill in the art at the time of

invention to have the tasks in Shi be BIOS tasks. One would have been motivated to

have the tasks be BIOS tasks since these tasks provide an interface between the

hardware and software and would allow for the communication to be done in a timely

manner.

19.   As per Claim 7, Bower further discloses that the waiting period is requested from

a BIOS kernel (column 1, lines 23-27).

20.   As per Claims 13-14, they are rejected for the same reason as Claims 6-7 above.

21.   As per Claim 15, Lake teaches the invention substantially as claimed including a

system comprising:

        a. a processor (page 2, paragraph 16); and

b. utilizing preemptive multitasking and cooperative multitasking (page 1,

paragraph 7) to increase utilization of processing power of the processor and to ensure

higher priority valued initialization tasks are executed with less interruption time than

lower priority valued initialization tasks when executing a plurality of initialization tasks

of different priority values (page 1, paragraph 3 & page 2, paragraph 16), wherein any

initialization task irrespective of priority value to request a particular waiting period

during execution of said initialization task (page 1, paragraph 13), and wherein the

initialization task requesting the particular waiting period occurs irrespective of elapsed

time due to execution of the initialization task (page 1, paragraph 6).

And, Bower further discloses multitasking that includes a BIOS (column 3, lines

39-62).

22.   As per Claim 19, Bower further discloses that the waiting period is requested

from a BIOS kernel (column 1, lines 23-27).

23.   As per Claim 20, Lake further discloses a plurality of hardware components

(page 2, paragraph 16).

24.   Claims 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Lake (US 2004/0045003) and Bower, III (US 7,051,331) as applied to claim 15 above,

and further in view of Shi et al. (US 6,757,897).

25.   As per Claim 16, Lake does not explicitly disclose of selecting a higher priority

task before selecting a lower priority task when possible. However, Shi discloses a

system that does select a higher priority task before selecting a lower priority task when

possible (column 2, lines 34-49).

26.   It would have been obvious to one of ordinary skill in the art at the time of

invention to have used Shi's status change of tasks in Lake's invention. One would have

been motivated since it is the goal of the invention to allow higher priority tasks to have

precedence over lower priority tasks which allows the system to finish high priority items

while still giving processing time to the less critical tasks and therefore avoiding task

starvation.

27.   As per Claim 17, Shi further discloses of selecting a task dependent on

completion of another after the first has completed (column 6, lines 59-67).

28.   As per Claim 18, Shi further discloses that the system has a timer (column 6,

lines 23-45).

Response to Arguments

29.   Applicant's arguments with respect to claims 1-20 have been considered but are

moot in view of the new ground(s) of rejection.

Conclusion

30.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Wilser whose telephone number is (571) 270-1689. The examiner can normally be reached on Mon-Fri 7:30-5:00 EST (Alt Fridays Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MPW
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